

CLAIMS

1. A manufacturing method for a circuit board, comprising the steps of:

(a) placing a resin-impregnated prepreg sheet and a metallic foil on a substrate;

5 (b) heating and pressurizing for a specific length of time at the first heating temperature set to a temperature close to the softening point of the resin while pressurizing the prepreg sheet after step (a) at a predetermined pressure; and

(c) heating and pressurizing the prepreg sheet after step (b) for a specific length of time at the second heating temperature higher than the first heating
10 temperature.

2. The manufacturing method for a circuit board of claim 1, further comprising the step of:

(d) heating and pressurizing the prepreg sheet after step (c) for a specific
15 length of time at the third heating temperature higher than the second heating temperature.

3. A manufacturing method for a circuit board, comprising the steps of:

(a) placing a resin-impregnated prepreg sheet and a metallic foil on a
20 substrate;

(b) heating and pressurizing for a specific length of time at the first heating temperature while pressurizing the prepreg sheet after step (a) at a predetermined pressure;

(c) heating and pressurizing the prepreg sheet after step (b) for a specific
25 length of time at the second heating temperature higher than the first heating

temperature.

(d) heating and pressurizing the prepreg sheet after step (c) for a specific length of time at the third heating temperature higher than the second heating temperature.

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4. The manufacturing method for a circuit board of claim 3,
wherein the first heating temperature is a temperature close to the softening point of resin in the prepreg sheet.

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5. The manufacturing method for a circuit board of claim 1 or claim 2,
wherein step (a) is such that the metallic foil is disposed on both surfaces of the prepreg sheet or the prepreg sheet is positioned and placed on both surfaces of respective circuit boards of two or more layers, followed by placing the metallic foil on outermost surfaces.

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6. The manufacturing method for a circuit board of claim 1 or claim 2,
wherein the prepreg sheet is provided with conducting holes filled with conductive paste.

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7. The manufacturing method for a circuit board of claim 6,
wherein the conductive paste contains conductive filler and thermosetting resin as main components, and

the softening point temperature of the thermosetting resin is lower than the softening point temperature of resin in the prepreg sheet.

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8. The manufacturing method for a circuit board of claim 2 or claim 3,
wherein the third heating temperature is equivalent to the hardening
temperature of the resin in the prepreg sheet.

5 9. The manufacturing method for a circuit board of claim 1 or claim 2,
wherein the prepreg sheet is in a state of B stage having compressibility.

10 10. The manufacturing method for a circuit board of claim 9,
wherein the substrate of the prepreg sheet is non-woven cloth of aromatic
polyamide fiber.

11. The manufacturing method for a circuit board of claim 9,
wherein the substrate of the prepreg sheet is woven cloth or non-woven cloth
of glass fiber.

15 12. The manufacturing method for a circuit board of claim 11,
wherein the compressibility of the prepreg sheet is less than 10%.

20 13. A circuit board, having circuit patterns formed on either surface of a
prepreg sheet that is a substrate impregnated with thermosetting resin and
conducting holes formed by filling conductive paste containing thermosetting resin
into through-holes provided in the prepreg sheet, which are connected in conductive
relationship to each other by heating and pressurizing,
wherein the softening point of the thermosetting resin in the conductive paste
25 is lower than the softening point of the thermosetting resin in the prepreg sheet.

14. The circuit board of claim 13,
wherein the substrate of the prepreg sheet is non-woven cloth of aromatic
polyamide fiber.

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15. The circuit board of claim 13,
wherein the substrate of the prepreg sheet is woven cloth or non-woven cloth
of glass fiber.

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16. The circuit board of claim 13,
wherein the conductive paste includes conductive filler and non-solvent type
thermosetting resin as main components.

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